Application Serial No: 09/826,712

Filed: April 5, 2001 Group Art Unit 2872

## In the claims:

Claims 1-4, 8-10 and 16-20 are pending in the application.

Please amend Claims 1 - 4, 8-9, and 19 as follows:

1. (Currently amended) A double confocal scanning microscope for examining a specimen, the microscope comprising:

at least one light source defining an illuminating beam path and emitting coherent light of various wavelengths;

at least one detector defining detection beam path; and

two <u>corrected</u> microscope objectives <u>defining an optical axis</u>, a beam splitter, and a lens arranged in the illuminating beam path and the detection beam path,

wherein the two corrected microscope objectives have optical properties and are arranged opposite of each other relative to a specimen, so that the longitudinal chromatic aberrations of the two <u>corrected</u> microscope objectives with respect to the optical axis are almost identical for the two microscope objectives, and wherein a resolution of the microscope is at least the order of magnitude of a theoretically achievable resolution of the microscope.

- 2.(Currently amended) The scanning microscope as defined in Claim 1, wherein the longitudinal chromatic aberrations of the two <u>corrected</u> microscope objectives are reduced with regard to a second plane being at least partially coincident with a focal plane of the two microscope objectives for light of a second wavelength.
- 3. (Currently amended) The scanning microscope as defined in Claim 2 1, wherein the second plane is symmetrically disposed between a first and a third planes, wherein the first plane is a focal plane of light of a first wavelength and wherein the third plane is a focal plane of light of a third wavelength.
- 4. (Currently amended) The scanning microscope as defined in Claim 1, characterized in that a the beam splitter of an interferometer is provided in the illuminating beam path and the detection beam path, thereby defining a first and a second individual partial beam paths wherein

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<u>along which</u> the accumulated aberrations of the of the interferometer are made opposite to one another.

8. (Currently amended) The scanning microscope as defined in Claim 3 1, wherein reduction of the chromatic aberrations occurs for the light of the first, second and third wavelengths selected from a wavelength range from about 200 nm to about 2000 nm.

- 9. (Currently amended) The scanning microscope as defined in Claim 3 1, wherein polarization properties of the two microscope objectives disposed along an the optical axis, a the beam splitter, and a the lens are coordinated with one another in such a way that the light of the first, second and third wavelengths is focused on the first, second and third plane accordingly.
- 10. (Previously amended) The scanning microscope as defined in Claim 1, further comprising a detection pinhole and a dichroic beam splitter detecting the illumination beam path, wherein a position of at least the dichroic beam splitter or a position of at least the detection pinhole can be altered.
- 16. (Previously amended) The scanning microscope as defined in Claim 10, wherein the detection pinhole is embodied as at least one chromatically selective component.
- 17. (Previously amended) The scanning microscope as defined in Claim 16, wherein at least one chromatically selective component is provided for each detected wavelength region.
- 18. (Previously amended) The scanning microscope as defined in Claim 16, further comprising a multi-band detector disposed after the chromatically selective component.
- 19. (Currently amended) The scanning microscope of Claim 3 1, wherein the first wavelength is about 488 nm, the second wavelength is about 567 nm, and the third wavelength is about 647 nm.

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20. (Previously added) The scanning microscope of Claim 1, wherein the theoretically achievable resolution capability of the microscope is about 100 nm.